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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/820,074

04/07/2004

Charles L. Gray JR.

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EXAMINER

HAMO, PATRICK

ART UNIT

PAPER NUMBER

3746

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/820,074	Applicant(s) GRAY ET AL.	
	Examiner Patrick Hamo	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☒ Claim(s) 14-16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>26 Aug 05, 12 Sep 05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 14-16 are objected to because of the following informalities: claims 14 and 15 seem to mistakenly refer to claim 12 whereas it is believed the first line of each claim should read "The method of claim 13, further comprising...". Claim 16 is objected to because it depends on objected claim 15. For purposes of examination, the Office interprets the claims to depend from claim 13. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6 and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "kidney port" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, this is understood to be the first port recited in line 3 of claim 4.

Claim 9 recites the limitation that the first and second axes "rotate in a plane around a common point, with respect to each other". It is unclear what is meant by this limitation. For purposes of examination, it is interpreted that the axes are in a common plane and that the axes of rotation intersect in at least one point.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3 and 11-16 rejected under 35 U.S.C. 102(b) as being anticipated by Valentin, 6,406,271.

Valentin discloses a valve plate 16 for a swash plate piston pump, the valve plate comprising first 73 and second 74 kidney-shaped semi-circular ports and first 75 and second 76 compensating ports at top-dead center 41 and bottom-dead center 42 positions, respectively, and are in fluid communication with each other (col. 12, ll. 55-56) so that the pressures at top-dead center and bottom-dead center are equalized (col. 13, ll. 1-5), port 73 connected to a high-pressure fluid source and port 74 to a low-pressure source, a cylinder barrel 3 having an even number of cylinder bores 9 (col. 6, ll. 15-26) formed circularly in the barrel, alternately contacting ports 73 and 74 as the barrel rotates, where by virtue of the even number of cylinders and the symmetry of the top-dead center and bottom-dead center positions, a first cylinder is at top-dead center when a second is at bottom-dead center and, as the barrel rotates, a third cylinder approached top-dead center when a fourth reaches bottom-dead center (col. 12, l. 50 – col. 13, l. 11), wherein the first cylinder is put in communication with kidney-shaped port 73 just as the second cylinder is put in communication with kidney-shaped port 74, and

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the fluid communication between the first cylinder and port 73 is broken just as fluid communication between the second cylinder and port 74 is broken.

6. Claims 4-6 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Umeda et al., 6,186,748.

Umeda discloses a piston pump comprising a valve plate or valving element 1 with suction port S and discharge port T provided on the surface of the valving element, a cylinder barrel or block 2 rotatably coupled to the valving element on sliding surface F, a plurality of cylinders or piston chambers formed in the block, a plurality of cylinder ports B1-B9 formed in the block face, putting the cylinder in contact with ports S and T as the block rotates, pressure relief or bypass ports M1 and M2 formed in the top-dead center and bottom-dead center positions of the valving element (see fig. 2b), a bore (shown emerging from M2 to port T in fig. 2b) connecting the two bypass ports for fluid communication via the discharge port and successive cylinder chambers, the cylinder ports including notches "e" such that the cylinders communicate with the bypass ports at top-dead and bottom-dead center positions, the cylinders breaking fluid communication with the kidney ports and entering communication with the bypass ports substantially simultaneously (see figs. 4a-4c), pistons P attached to a thrust or swash plate 4 via shoe sockets 7 at one end and formed in a cylinder at the other (see fig. 1), the axis of rotation of the cylinder block and of the thrust plate being in common planes and including common points.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valentin.

Valentin discloses a valve plate 16 for a swash plate piston pump, the valve plate comprising first 73 and second 74 kidney-shaped semi-circular ports and first 75 and second 76 compensating ports at top-dead center 41 and bottom-dead center 42 positions, respectively, and are in fluid communication with each other (col. 12, ll. 55-56) so that the pressures at top-dead center and bottom-dead center are equalized (col. 13, ll. 1-5), port 73 connected to a high-pressure fluid source and port 74 to a low-pressure source, a cylinder barrel 3 having an even number of cylinder bores 9 (col. 6, ll. 15-26) formed circularly in the barrel, alternately contacting ports 73 and 74 as the barrel rotates, where by virtue of the even number of cylinders and the symmetry of the top-dead center and bottom-dead center positions, a first cylinder is at top-dead center when a second is at bottom-dead center and, as the barrel rotates, a third cylinder approached top-dead center when a fourth reaches bottom-dead center (col. 12, l. 50 – col. 13, l. 11).

Valentin does not disclose a bore provided between the first and second pressure relief ports to place the first and second pressure relief ports in fluid communication with each other.

However, Valentin does teach that the pressure relief ports or compensating ports 75 and 76 are in fluid communication (col. 12, ll. 55-56) without regard to the means by which they are connected to each other. Applicant does not disclose that having a bore provided between the ports to connect them solves any stated problem. Moreover, it appears that the ports of Valentin, or applicant's invention, would perform equally well regardless of the mode by which the ports are connected.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified Valentin such that the compensating ports 75 and 76 were connected via a bore because such a modification would have been considered a mere design choice which fails to patentably distinguish over Valentin.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umeda et al.

Umeda discloses all the limitations substantially as claimed and discussed above except for the following: a plurality of vent apertures formed in the barrel face, each aperture being in fluid communication with a respective one of the plurality of cylinder ports and positioned in the barrel face such that when each cylinder port is at the top-dead center or bottom-dead center of rotation, the respective vent aperture is coupled to the first or second pressure relief port, respectively.

However, Umeda discloses notches "e" that perform substantially the same function. Modifying the notches to form apertures is a mere change in shape that constitutes an obvious design choice and fails to patentably distinguish over the prior art of Umeda. See MPEP §2144.04(4)(b).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Hamo whose telephone number is 571-272-3492. The examiner can normally be reached on M-F 8:30-5.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on 571-272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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